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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/815,311 | 03/23/2001 | Eduardo Grizante Redondo | 05788.0157 | 7258 |
| 22852 | 7590 | 06/01/2004 | EXAMINER | |
| FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 1300 I STREET, NW WASHINGTON, DC 20005 | | | GRAY, JILL M | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1774 | |

DATE MAILED: 06/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/815,311

Applicant(s)

REDONDO ET AL.

Examiner

Jill M. Gray

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Response to Amendment

The rejection of claims 16-30 under 35 U.S.C. 102(e) as anticipated by Sonoda et al, 5,707,732 is withdrawn in view of applicants' amendments.

Claims 16-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sonoda in view of Redondo et al, 6,552,112 B1 (Redondo), is withdrawn in view of applicants' statement of common ownership.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 16-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sonoda et al, 5,707,732 (Sonoda) in view of Betso, et al, 6,262,151 B1 (Betso) for reasons of record.

Claims 16-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sonoda et al, 5,707,732 (Sonoda) in view of Metzemacher et al, 5,139,875 (Metzemacher), for reasons of record.

Response to Arguments

Applicant's arguments filed February 11, 2004 have been fully considered but they are not persuasive.

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Applicants arguments in response to the anticipation rejection that 1) Sonoda et al does not expressly teach the use of natural magnesium hydroxide; 2) Sonoda et al does not inherently teach the use of natural magnesium hydroxide; 3) Sonoda et al does not teach the hydrolysable organic silane limitation; and 4) Sonoda et al does not teach the no appreciable cross-linking limitation are moot in view of the withdrawal of this rejection.

Applicants argue that the Office does not address how Section 103(a) applies with respect to Sonoda et al.

In this concern, applicants' attention is directed to page 4, paragraph 3 through page 5, paragraph 1 of the Office Action.

Applicants assert that evidence of secondary consideration, such as unexpected results or commercial success is irrelevant to 35 U.S.C. 102 rejections.

The examiner disagrees. "[T]he PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his [or her] claimed product. Whether the rejection is based on inherency under 35 U.S.C. 102, or *prima facie* obviousness under 35 U.S.C. 103, jointly or alternatively, the burden of proof is the same..." MPEP 2112.

Applicants argue that they do not assert that one of ordinary skill in the art is unaware of natural magnesium hydroxide, only that in view of the teachings of the prior art, one of ordinary skill in the art would not envisage Sonoda et al's disclosure as a disclosure of natural magnesium hydroxide, further citing U.S. Patent 4,145,404 and EP 0780425 as support.

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The examiner disagrees. The fact that Sonoda teaches that any conventional off-the-shelf magnesium hydroxide can be used necessarily embraces any and all conventional off-the-shelf magnesium hydroxide. Sonoda clearly provided direction to the skilled artisan as to what parameters were critical, namely, the inclusion of magnesium hydroxide as a flame retardant in cable compositions, and a suggestion as to what type of magnesium hydroxide could be used with a reasonable expectation of success, in particular, any conventional off-the-shelf magnesium hydroxide. Certainly one of ordinary skill in the art would choose and determine the specific magnesium hydroxide from those commercially available commensurate with the desired end product. However, this selection would amount to no more than an obvious design choice, in the absence of clear evidence to the contrary and in view of the clear direction provided by the prior art. Applicants reference to U.S. Patent 4,145,404 and EP 0 780,725 have been noted. It is also noted that US 4,145,404 and EP 0 780 725 do not disclose "natural magnesium hydroxide" rather, "known magnesium hydroxide" or "conventional available magnesium hydroxide" (4,145,404) and "conventional magnesium hydroxide" (EP 0 780 725). Moreover, "[a] known or obvious composition does not become patentable simply because it has been described as somewhat inferior to some other product for the same use." *In re Gurley*, 27 F.3d 551, 554, 31 USPQ2d 1130, 1132 (Fed. Cir. 1994).

Applicants argue that Sonoda does not expressly or inherently disclose hydrolysable organic silane groups grafted onto the polymer chain for compatibilization of the natural magnesium with the polymer, which is in stark contrast to applicants'

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claims that required the hydrolysable organic silane groups to be used to compatibilize the polymer with the natural magnesium hydroxide.

In this concern, there is not factual evidence on this record that the organic silane groups of Sonoda do not compatibilize the polymer with the magnesium hydroxide. True Sonoda teaches that his composition can be moisture cured; nevertheless, this teaching does not preclude some silane groups compatibilizing the polymer with the magnesium hydroxide. Further, the fact that the prior art includes hydrolysable organic silane groups in its composition for a purpose different from the claimed invention is not inventive and does not preclude the clear teachings of a cable having a flame-retarding coating, wherein said flame-retardant coating is essentially as claimed by applicants and comprises 1) an ethylene homopolymer or copolymer having the requisite density 2) a copolymer of ethylene and an alpha-olefin of the requisite properties, 3) magnesium hydroxide and wherein 1 or 2 contains hydrolysable silane groups grafted onto the polymer chain. There is no factual evidence on this record that the silane groups of Sonoda do not compatibilize the polymer with the magnesium hydroxide. Moreover, it is the examiner's position that the reason or motivation to modify the reference may often suggest what the inventor has done, but for a different purpose or to solve a different problem. It is not necessary that the prior art suggest the combination to achieve the same advantage or result discovered by applicants. *In re Linter*, 458 F.2d 1013, 173 USPQ 560 (CCPA 1972).

Applicants argue that Sonoda does not recognize the limitation of "no appreciable crosslinking" and teaches away from that limitation.

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In this concern, it is the examiner's position that the limitation of "no appreciable crosslinking" does not exclude some degree of crosslinking. This language does not specify the degree of crosslinking or gel content.

Applicants argue that the Office must establish some motivation to combine or modify the teachings of prior art references Sonoda and Metzemacher and that the Office asserts that a motivation exist because of the utility of natural magnesium hydroxide which is insufficient. Applicants argue that the Office must offer a reason known in the art to use natural magnesium hydroxide as substitution for the particles of Sonoda and applicants' specification is unavailable for that purpose.

Agreeable the Office must establish some motivation to combine or modify the teachings of the prior art. In the instant case, the examiner's position is not the "substitution" of the particles of Sonoda with natural magnesium hydroxide rather; what the combined teachings of Sonoda and Metzemacher would have fairly suggested to the skilled artisan at the time the invention was made. In particular, the teachings of Metzemacher would have provided the skilled artisan reason to believe that natural magnesium hydroxide could have been used in the composition of Sonoda with a reasonable expectation of success in obtaining a flame-retardant composition. Metzemacher clearly teaches that both natural magnesium hydroxide and synthetic magnesium hydroxide can be used in the formation of flame retardant compositions. One of ordinary skill in the art in possession of the disclosures of Sonoda and Metzemacher would have had reason to believe that as the "conventional off-the-shelf magnesium hydroxide" of Sonoda either natural magnesium hydroxide or synthetic

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magnesium hydroxide could be used with the reasonable expectation of success in obtaining a flame-retardant coating composition. Natural magnesium hydroxide and synthetic magnesium hydroxide are known in the art and both are known as flame-retardant filler material. That the skilled artisan may prefer one magnesium hydroxide over the other does not preclude the evidence that each are known to be usable and suitable in producing flame-retardant coatings. While natural magnesium hydroxide may be known for its lack of polarity, this is of no moment in view of the teachings of Metzemacher of coating the particles to enhance their affinity to polymeric materials. The fact that Metzemacher accounts for this concern would have provided a suggestion to the skilled artisan that natural magnesium hydroxide could be used successfully in flame-retardant coating compositions. Sonoda's clear acceptance of conventional off-the-shelf magnesium hydroxide necessarily embraces not only synthetic magnesium hydroxide but natural magnesium hydroxide as well. That the skilled artisan would choose natural magnesium hydroxide over synthetic magnesium hydroxide is construed to be no more than a preferential selection of one magnesium hydroxide over the other being used for its art recognized purpose, i.e. flame-retardant filler material. Again, as set forth previously, there is no factual evidence on this record of superior, unexpected or patentably distinguishable properties of a cable having a flame-retardant coating composition wherein said coating contains natural magnesium hydroxide and wherein said properties are directly related to the utility of natural magnesium hydroxide over synthetic magnesium hydroxide.

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Applicants argue that the Office must establish some reasonable expectation of success for the proposed combination/modification, further arguing that the Office has only provided opinion and no recitation of facts. Applicants additionally argue that while Metzemacher has a general disclosure of the use of its particles in polymers, that does not necessarily mean there is an expectation of success with applicants' polymers.

In this concern, the examiner's arguments as set forth above are fully incorporated herein. Also, Metzemacher teaches that his particles are effective in flame-retardant polyethylene and copolymers thereof, EVA and copolymers thereof, which are polymers of the type contemplated by applicants in present claim 1.

Applicants argue that Sonoda only teaches the use of hydrolysable organic silane groups for cross-linking and not compatibilization and Metzemacher does not correct this deficiency, further arguing that there is nothing in Metzemacher that suggests the coupling agents may be grafted to the polymer as required by all of the claims.

In response thereto, Metzemacher is relied upon for all that he would have reasonably conveyed to one of ordinary skill in the art, namely, that it is known in the art to use natural magnesium hydroxide as a flame-retardant filler in polyolefin compositions.

Applicants argue that Sonoda only teaches the use of hydrolysable organic silane groups to achieve cross-linking within the polymer and not compatibilization between the polymer and the particles, and Metzemacher does not correct this

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deficiency, further arguing that Metzemacher confirms applicants' position that cross-linking and compatibilization are two different processes with different purposes.

As set forth above, Metzemacher is relied upon for all that he would have reasonably conveyed to one of ordinary skill in the art at the time the invention was made, namely that it was known in the art at the time the invention was made to use natural magnesium hydroxide as flame-retardant filler material in the formation of flame-retardant compositions. Also, as set forth previously, the prior art is not required to have the same purpose as applicants. The reason or motivation to modify the reference may often suggest what the inventor has done, but for a different purpose or to solve a different problem. It is not necessary that the prior art suggest the combination to achieve the same advantage or result discovered by applicants. *In re Linter*, 458 F.2d 1013, 173 USPQ 560 (CCPA 1972).

No claims are allowed.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jill M. Gray whose telephone number is 571-272-1524. The examiner can normally be reached on M-F 10:30-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jill M. Gray
Examiner
Art Unit 1774



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